



December 5, 2002

DESIGN MEMORANDUM No. 02-11
TECHNICAL ADVISORY

TO: All Design, Operations, District Personnel, and Consultants

FROM: /s/ Anthony L. Uremovich
Anthony L. Uremovich
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SUBJECT: General Equations for Sag Vertical Curve Lengths at Undercrossings

EFFECTIVE: Immediately

The general equations for sag vertical curve lengths at undercrossings shown in *Indiana Design Manual* Section 44-3.02(04) should be revised to read as follows:

1. Sight distance greater than length of vertical curve ($S > L$)

$$L = 2S - \left\{ \frac{800 \cdot [C - 0.5(h_1 + h_2)]}{A} \right\} \quad \text{(Equation 44-3.5)}$$

2. Sight distance less than or equal to length of vertical curve ($S \leq L$)

$$L = \frac{AS^2}{800[C - 0.5(h_1 + h_2)]} \quad \text{(Equation 44-3.6)}$$

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